meitner

PAUSE

TRACK ⟳ ALL INVERTED POLARITY

⏏/■ ▶/Ⅱ SOURCE ⟳ ◄◄ ►►ㅣ

ma 2
mdat technology

Safety Instructions

Prior to Installing you new Meitner Audio product please read the following safety instructions:

- Read and follow all instructions.
- Keep these instructions.
- Do not use or install product near any sources of water, rain and/or moisture.
- Clean using only a dry cloth.
- Install only in accordance with the manufacturer's instructions.
- Refer all servicing to approved service personnel.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Do not install product outdoors or in direct sunlight.
- Leave at least 10cm or 4 inches around product to ensure proper ventilation.
- Do not place product near strong electrical or magnetic radiation/emmissions or near a power amplifier.

This Meitner product must be connected to a mains socket outlet with a protective earthing connection (grounding pin).

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO WATER OR MOISTURE.

EEC: This product has been designed and tested to comply with the limits set out in EN55013, EN55020 and EN 60065:2009 (electrical safety).

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Safety Instructions

CAUTION

This product is a Class 1 laser product, but this product contains a laser diode higher than Class 1. To ensure continued safety do not remove any covers or attempt to gain access to the inside of the product. Refer all servicing to qualified personel. The following caution label appears on your unit on the rear panel:

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure. The use of optical instruments with this product will increase eye hazard.

Information To The User
Alteration or modification carried out without appropriate approval may invalidate the user's right to operate the equipment.

Introduction

Welcome and congratulations on purchasing a Meitner Audio product.

We at Meitner Audio have strived to build and perfect the absolute best product using our award winning technology and decades of experience.

We are confident that our products will bring you musical joy and enjoyment for many years to come.

This manual provides important information regarding the use, installation and care of your new Meitner Audio product.

Table of Contents

Warranty

Meitner Audio warrants the MA-2 product against defects in material and workmanship under normal use and service for a period of time specified by the product's serial number from the date of first delivery to the owner. The warranty time period is 5 years. Warranty is limited to the original owner and is non-transferable.

Meitner Audio will pay for return shipping charges back to the owner when the product is sent to Meitner Audio within the first 90 days after purchase (US and Canada end-users only). Otherwise, owner will be responsible for all shipping charges to and from Meitner Audio.

For all warranty claims, a copy of the original invoice must accompany the product.

Opening the product or modifying it in any way by the owner, including but not limited to cryogenic treatment, will void any warranty.

Please contact Meitner Audio (support@meitner.com) for RMA number and shipping instructions before shipping any product to Meitner Audio.

Meitner Audio products are sold worldwide through authorized dealers with restricted territories. Meitner Audio product purchased from non-authorized dealers or from a dealer selling outside his/her authorized territory will automatically void product warranty.

MA-2 Integrated Playback System

The MA-2 is a high-performance CD player and stereo digital converter with a wide variety of user selectable digital inputs. It has been refined from our high end and acclaimed professional converter systems which are used worldwide in professional studios to create some of the finest recordings.

The MA-2 provides Redbook CD playback and near instantaneous digital to analog conversion from a host of digital inputs.

The MA-2 includes digital inputs for USB, AES, TOSLINK and SPDIF.

Word lengths up to 24bit, and sample frequencies up to 192kHz are supported on all digital inputs.

DSD streaming is also supported on the USB digital audio input.

Features & Specifications

Redbook CD Playback

2-Channel Digital to Analog Conversions (All Digital Inputs):
- 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz & 192kHz
- Word lengths up to 24bit

2-Channel DSD (1bit, 2.8Mhz) Digital to Analog Conversion is supported using DoP 1.0 specification via the USB digital audio input.

Available Digital Inputs:
- 1x USB
- 1x AES/EBU (XLR)
- 1x SPDIF (RCA)
- 1x TOSLINK (Optical)

Analog Outputs:
- Balanced (XLR)
  Output Line Level (0dBfs signal on AES/EBU input): 4.6Vrms
  Output Impedance: 300Ω
- Un-Balanced (RCA)
  Output Line Level (0dBfs signal on AES/EBU input): 2.3Vrms
  Output Impedance: 150Ω

Note:
1. XLR analog outputs are balanced with pin 2 hot, pin 3 cold and pin 1 ground.
2. For proper digital audio data transfer (especially at 176kHz and 192kHz) appropriate high quality TOSLINK, SPDIF, AES and USB 2.0 cables must be used.

Features & Specifications

System:
- System control via serial RS-232
- USB data port for software upgrades
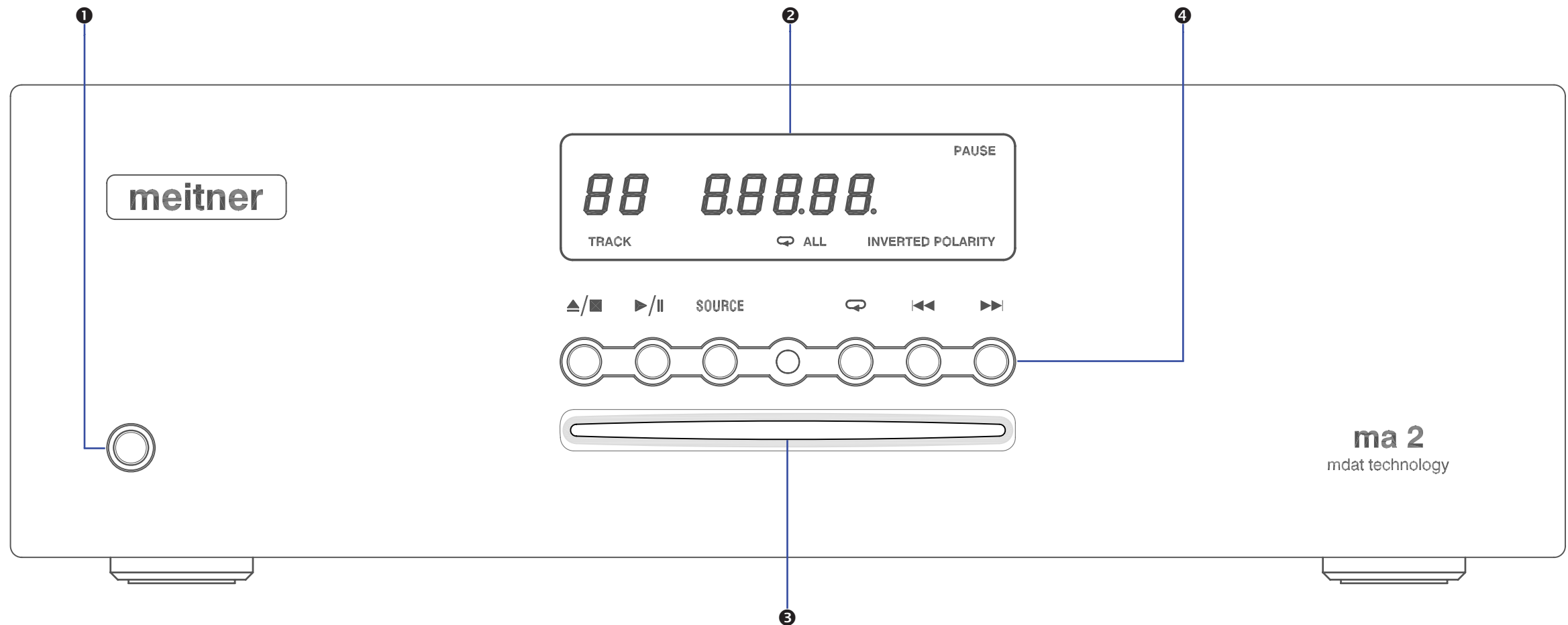
Power supply:
- Power factor corrected
- Universal 90V-260V, 50/60Hz operation
- Power consumption: 50W
- CE Approved

Remote control: Infrared

Dimensions: W x D x H: 435 x 400 x 92mm
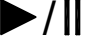
Weight: 7.43kg

Front Panel & Functions

1. Standby/Power-Save button:
   Toggles the operation between on and power-save mode. In power save mode the remote control and all front panel functions become inactive.

2. Display:
   Display can be dimmed or brigthened using the display brightness button.

3. MA-2 drive slot.

Front Panel & Functions

4. Front Panel Buttons and Functions:

- ⏏/⏹   : EJECT/STOP - Stops CD playback. Pressing stop a second time or when the drive is alread in stop mode ejects the CD from the slot drive.

- ▶/⏸   : PLAY/PAUSE - Starts or Pauses CD playback.

- Source : Toggles between the various available digital inputs.

- ⟲   : REPEAT - This buttons toggles through 3 states:
    - Repeat Track – repeats current track
    - Repeat All – repeats entire disc
    - Repeat Off - turns repeat function off

- ⏮   : PREVIOUS - Jumps back a CD track. Press and hold to enter reverse scan mode.

- ⏭   : NEXT - Jumps ahead a CD track. Press and hold to enter forward scan mode.

All digital inputs support 44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz and 192kHz.
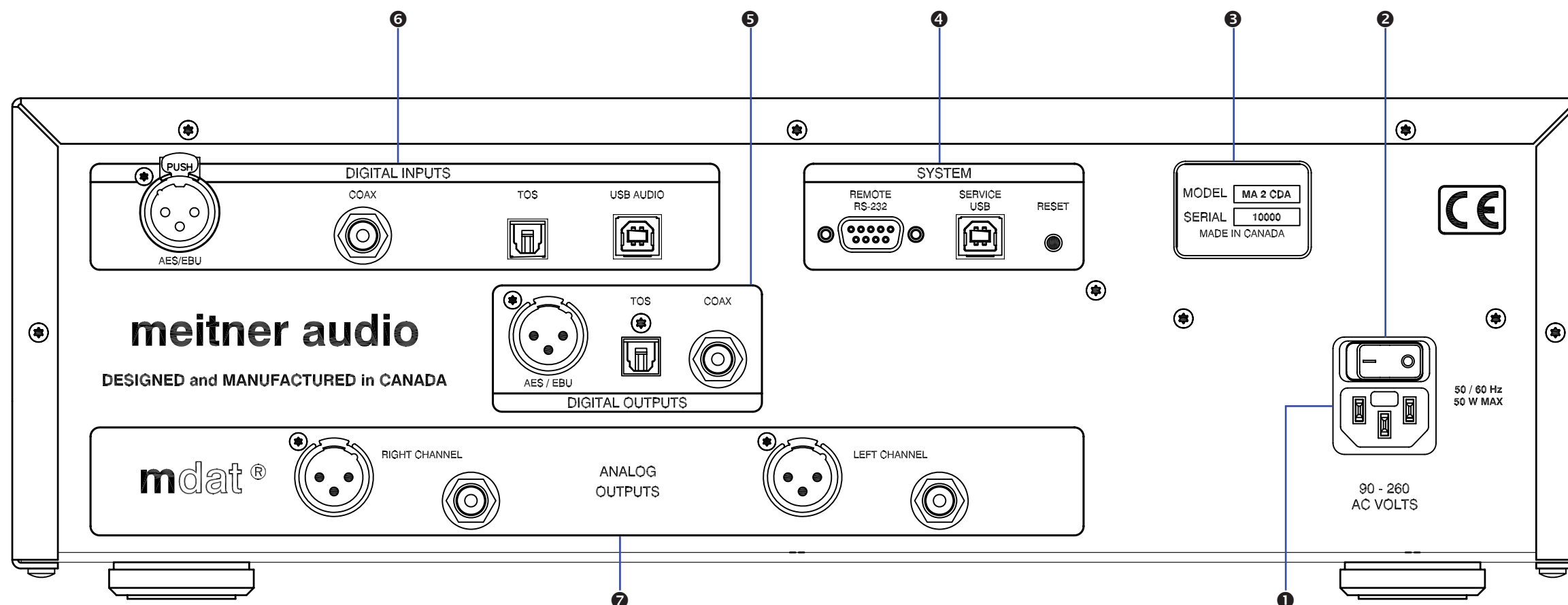All digital inputs support word lengths up to 24bit.
USB input also supports DSD streaming over USB using DoP 1.0 specification.

Front Panel & Functions

Please note:

1. The Meitner Audio MA-2 is a Class 2.0 USB Audio device. Class 2 audio devices are supported natively in OSX 10.5.7 and higher, and on Linux with ALSA 1.0.23 and higher.

2. For Windows XP, Vista and Windows 7, Class 2 USB Audio device drivers are included with the MA-2. Please see page 14 for installation instructions.

3. Please use USB 2.0 compliant devices for maximum high resolution audio compatibility. Using the MA-2 with a USB 1.0 and 1.1 device/interface may limit digital audio bandwidth to 44.1/48kHz sample frequencies.

4. For proper high definition audio transfer (especially 176.4 and 192kHz sample frequencies) using the TOSLINK interfaces please ensure that your digital source device and optical cables support sample frequencies above 48kHz.

Rear Panel & Functions

1. Main Power connector
2. Main Power Switch.
3. Product model and serial number indicator:
   Warranty void if model/serial number indicator is not attached to unit, missing or damaged whereby serial number cannot be seen.

Rear Panel & Functions

4. System

> Remote:
> > • Wired RS232: RS232 communication port
>
> Service:
> > • USB: Software update port.
> > • RESET: Used to access the backup firmware in connection with software upgrades via the USB port. Should not be used during normal operation.

5. Digital Outputs (Redbook CD Playback, 44.1kHz):
   - AES/EBU: AES/EBU (XLR) PCM digital output.
   - COAX : SPDIF (RCA) format PCM digital output.
   - TOS : SPDIF (TOSLINK) format PCM digital output.

6. Digital Inputs:
   - AES/EBU: AES/EBU (XLR) PCM digital audio input.
   - COAX 1: SPDIF (RCA) format PCM digital audio input.
   - COAX 2: SPDIF (RCA) format PCM digital audio input.
   - TOS 1: SPDIF (TOSLINK) format PCM digital audio input.
   - TOS 2: SPDIF (TOSLINK) format PCM digital audio input.
   - USB Audio: USB format PCM and DSD digital audio input.

7. Analog Line Output:
   - Left and Right Balanced (XLR) Connectors
   - Left and Right Un-Balanced (RCA) Connectors
   - Level (Output Line Level with 0dBfs signal on AES/EBU input):
     > XLR outputs: 4.6Vrms (+15.45dBu)
     > RCA outputs: 2.3Vrms (+9.45dBu)

Connecting & Operating the MA-2

Please see next page with regards to installing the MA-2's USB Audio drivers.

1. Connect the included power cable to the MA-2 power connector than to a free power receptacle.
2. Connect the appropriate digital source connections up to the MA-2's digital inputs using the appropriate high quality digital audio and USB cables.
3. Connect the appropriate analog outputs of the MA-2 to your pre-amp or integrated amplifier.
4. Turn on the MA-2 using the main power switch and select the CD or a digital input by pressing SOURCE selector button or using the remote.
5. Insert a CD into the slot drive to start playing Redbook CDs.
6. Once locked to a sample frequency the MA-2 will start its conversion process and you will almost instantaneously be able to listen to music.
7. The MA-2 remembers the last digital input it was switched too prior to being switched off.

Connecting & Operating the MA-2

USB Audio Input:

1. First, use only well-sheilded certified USB 2.0* cables to connect the MA-2's USB Audio input to any USB digital audio source component (computer, laptop, media server etc.)
2. The MA-2's USB Audio interface uses the B-type USB connector similar to connectors used on printers. Please see image below:

3. Select the USB Audio input using front panel input selector buttons.
4. For MAC OSX systems, no driver is needed. OSX has the appropriate USB driver already installed.
5. For Windows XP, Vista (32 or 64bit) and Windows 7 (32 or 64bit) systems install the provided USB driver located on the software CD in folder named "Meitner MA-2 USB Audio Driver" and run the "setup.exe" file. Read and follow the installation instructions.
6. Kernal, ASIO and WASAPI (Vista and Windows 7) drivers will be installed.

*Not using proper cables will cause audio issues between digital source and DAC.

Connecting & Operating the MA-2

7. For Windows Media Player playback; in Windows Control Panel set the default sound playback to the MA-2 USB Audio device (XMOS XS1-L1 Audio).

8. In general for most audio applications you will be able to select the MA-2 USB Audio device (XMOS XS1-L1 Audio) from within the application and choose the appropriate driver Kernal, ASIO or WASAPI.

DSD Audio

1. The MA-2 currently supports DSD audio streaming and conversion over USB using DoP 1.0 specification.

2. Currently there are many different media players that support DSD audio file playback. Some of them that have been fully tested in-house eg. JRiver for Windows, and Audivarna and Pure Music for OSX.

3. Every media player will have specific software installation instructions and setup procedures for enabling DSD streaming. Please consult the specific software manual.

4. Some software manufacturers have also provided quickstart and software setup guides for download and online. If available Meitner Audio will post links to this on the MA-2 support website.

5. When setup correctly and DSD data is detected, the MA-2 will display DSD on its front display window as digital audio format.

Infrared Remote Control

Included with the MA-2 is an infrared remote control. Please see remote guide provided to the right:

☀	:	Display brightness control.
SOURCE	:	Toggles between CD and digital inputs.
CD	:	Selects CD player mode.
USB	:	Selects the USB input
AES	:	Selects the AES/EBU input via balanced XLR digital connector.
COAX 1	:	Selects the COAXIAL 1 SPDIF input via COAX 1 RCA connector.
COAX 2	:	Selects the COAXIAL 2 SPDIF input via COAX 2 RCA connector.
TOS 1	:	Selects the TOSLINK 1 SPDIF input via TOS 1 optical connector.
TOS 2	:	Selects the TOSLINK 2 SPDIF input via TOS 2 optical connector.
MA-1	:	Selects MA-1 remote operation
MA-2	:	Selects MA-2 remote operation
VOL+	:	Increase volume
VOL-	:	Decrease volume

Infrared Remote Control

Included with the MA-2 is an infrared remote control. Please see remote guide provided to the right:

▶❚❚ : CD player PLAY/PAUSE control.

❚◀◀ : CD player PREVIOUS track function .

▶▶❚ : CD player NEXT track function.

MUTE : Mutes the analog outputs.

■ : CD player STOP playback function.

▶▶ : CD player FORWARD SCAN function.

◀◀ : CD player REVERSE SCAN function.

REPEAT : Toggles through the different CD player REPEAT functions.

TRACK : CD player TRACK REPEAT function.

ALL : CD player REPEAT ALL function.